

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A Ddevice for confinement of plasma (~~5~~) in a chamber (~~1~~) comprising creation means ~~of for~~ creating a magnetic field, ~~the said~~ creation means comprising a series of permanent magnets (~~3~~) capable of creating a magnetic field presenting an alternating multipole magnetic structure to the plasma, ~~characterised in that~~ wherein the magnets (~~3~~) are capable of confining the plasma in a large volume, the magnets being discontinuously distributed around the volume, and ~~in that~~ wherein the magnets (~~3~~) are arranged inside the chamber, at a distance from ~~the~~ walls of the chamber held in place by support rods (~~4~~), the support rods (~~4~~) extending along the axis of magnetisation of ~~the~~ said magnets and being arranged so that ~~they~~ the support rods are centred on ~~the~~ poles of the permanent magnets, such that the walls are outside an effective influence area of the magnets.

Claim 2 (Currently Amended) The Ddevice according to claim 1, ~~characterised in that~~ wherein the support rods (~~4~~) extend perpendicular to the walls of the chamber.

Claim 3 (Currently Amended) The Ddevice according to ~~either~~ claim 1 ~~or 2~~, ~~characterised in that~~ wherein the series of permanent magnets (~~3~~) is in a discontinuous checkerboard type structure.

Claim 4 (Currently Amended) The Ddevice according to ~~one of claims 1 to 3~~ claim 1, ~~characterised in that~~ wherein the series of permanent magnets (~~3~~) is in a discontinuous structure with interrupted line.

Claim 5 (Currently Amended) The Device ~~device~~ according to ~~one of claims 1 to~~ [[4]]claim 1, ~~characterised in that~~ wherein the permanent magnets (~~3~~) have a symmetry of revolution.

Claim 6 (Currently Amended) The Device according to ~~one of claims 1 to 5~~ claim 1, ~~characterised in that~~ wherein the permanent magnets are cylindrical.

Claim 7 (Currently Amended) The ~~Device~~ device according to ~~one of claims 1 to 6~~claim 1, ~~characterised in that~~wherein the cross-section of the rods is small compared with the dimensions of the permanent magnets.

Claim 8 (Currently Amended) The ~~D~~device according to ~~one of claims 1 to 6~~claim 1, ~~characterised in that~~wherein the support rods (4) are tubes, the permanent magnets being located inside the tubes (4) in the end extending into the chamber (1), each magnet comprising a plate or a disk (18) made of a material with high magnetic permeability on its face furthest back from the inside of the chamber (1).

Claim 9 (Currently Amended) The ~~D~~device according to claim 8, ~~characterised in that~~wherein the material is soft iron.

Claim 10 (Currently Amended) The ~~D~~device according to ~~one of claims 1 to 9~~claim 1, ~~characterised in that it comprises~~comprising cooling means ~~of for~~ cooling the permanent magnets (3).

Claim 11 (Currently Amended) The ~~D~~device according to claim 10, ~~characterised in that~~wherein the cooling means comprise a supply-return circulation circuit for a fluid around each magnet, this circuit comprising a duct passing through the centre of the magnet.

Claim 12 (Currently Amended) The ~~D~~device according to ~~one of claims 1 to 11~~claim 1, ~~characterised in that~~wherein the permanent magnets are contained in an external protective enclosure (16) that contains a non-magnetic conducting or dielectric material.

Claim 13 (Currently Amended) The ~~D~~device according to ~~one of claims 1 to 12~~claim 1, ~~characterised in that it comprises~~comprising means a plasma production source of producing plasma that ~~are~~is independent of the confinement means.

Claim 14 (Currently Amended) The ~~D~~device according to claim 13, ~~characterised in that~~wherein the plasma production source is a structure with thermo-emissive filament

excitation.

Claim 15 (Currently Amended) ~~The D~~device according to claim 13, ~~characterised in that~~wherein the plasma production source is a structure excited by application of an electric voltage with a given frequency and shape, to the gas, for a required application.

Claim 16 (Currently Amended) ~~The D~~device according to claim 13, ~~characterised in that~~wherein plasma production means contain means capable of applying a microwave electric field to the gas.

Claim 17 (Currently Amended) ~~The D~~device according to ~~one of claims 1 to 12~~claim 1, ~~characterised in that it comprises~~comprising plasma production means that use at least a part of the confinement means.

Claim 18 (Currently Amended) ~~The D~~device according to claim 17, ~~characterised in that~~wherein the plasma production means are capable of applying an electric voltage with a determined frequency and shape to the confinement structure, for a required application.

Claim 19 (Currently Amended) ~~The D~~device according to claim 17, ~~characterised in that~~wherein the production means include means capable of applying an electric microwave field to the gas.